

CLAIMS:

1.. An isolated polypeptide of the sequence in SEQ ID NO:1.

2 The isolated polypeptide of Claim 1, wherein said peptide induces apoptosis in a cell.

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3. An isolated polynucleotide which encodes the polypeptide of Claim 1.

4. A vector comprising the polynucleotide of Claim 3.

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5. A prokaryotic cell comprising the polynucleotide of Claim 3.

6. A eukaryotic cell comprising the polynucleotide of Claim 3.

15 7. A composition comprising the polynucleotide of Claim 3 and a physiologically acceptable carrier.

8. A composition comprising the peptide of Claim 1 and a physiological acceptable carrier.

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9. An isolated polypeptide of the sequence in SEQ ID NO:2.

10. An isolated polynucleotide which encodes the polypeptide of Claim 9.

11. A vector comprising the polynucleotide of Claim 10.

12. A prokaryotic cell comprising the polynucleotide of Claim 10.

13. A eukaryotic cell comprising the polynucleotide of Claim 10.

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14. A composition comprising the polynucleotide of Claim 10 and a physiologically acceptable carrier.

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15. A composition comprising the peptide of Claim 9 and a physiological acceptable carrier.

16. An isolated polypeptide of the sequence SEQ ID NO:1 operably linked to the sequence SEQ ID NO:2.

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17. An isolated polynucleotide which encodes the polypeptide of Claim 16.

18. A vector comprising the polynucleotide of Claim 17.

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19. The vector of Claim 18 which is the plasmid p[95-114]EGFP[206-245] deposited in the CNCM on January 21, 2000 under the accession number I-2380.

20. The vector of Claim 18 which is the plasmid p[95-114][211-245] deposited in the CNCM on May 10, 2000 under the accession number I-2475.

21. A prokaryotic cell comprising the polynucleotide of Claim 17.

22. A eukaryotic cell comprising the polynucleotide of Claim 17.

23. A composition comprising the polynucleotide of Claim 17 and a physiological
5 acceptable carrier.

24. A composition comprising the polypeptide of Claim 16 and a physiological
acceptable carrier.

10 25. A method of inducing apoptosis in a cell comprising administering an effective
amount of the polypeptide of Claim 16 to the cell to induce apoptosis.

26. The method of Claim 25, wherein said cell is in a human patient.

15 27. The method of Claim 25, wherein said patient is suffering from cancer.

28. The method of Claim 25, wherein said patient is infected with a Flavivirus

29. A method of inducing apoptosis in a cell comprising delivering the polypeptide
20 of Claim 16 in an amount sufficient to induce apoptosis.

30. The method of Claim 29, wherein said delivering comprises delivering a
polynucleotide encoding said polypeptide to the cell, wherein said polynucleotide is in an

expression vector suitable to express said polypeptide in the cell.

31. The method of Claim 29, wherein said cell is in a human patient.

32. The method of Claim 31, wherein said patient is suffering from cancer.

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33. The method of Claim 31, wherein said patient is infected with a Flavivirus.

34. A method of screening for peptides capable of inducing apoptosis comprising
introducing a recombinant protein into a cell, wherein said recombinant protein

10 comprises the peptide to be screened operably linked SEQ ID NO:2; and
detecting apoptosis in the cell.

35. The method of Claim 34, wherein said introducing step comprises introducing an
expression vector comprising a polynucleotide which encodes said recombinant protein.

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36. The method of Claim 34, wherein said recombinant protein further comprises a
green fluorescent protein.

37. A method of screening for molecules which inhibit apoptosis induced by the
polypeptide of the sequence SEQ ID NO:1 comprising

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introducing said polypeptide into a cell;

contacting said cell containing said polypeptide, with the molecule to be screened;

and

detecting the presence or absence of apoptosis in the cell.

38. The method of Claim 37, wherein said polypeptide is operably linked to the polypeptide of the sequence SEQ ID NO:2.

5 39. The method of Claim 37, wherein said polypeptide is operably linked to a green fluorescent protein.

40. The method of Claim 37, wherein said polypeptide is not linked to a green fluorescent protein.

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41. The method of Claim 37, wherein said introducing comprises introducing a polynucleotide which encodes said polypeptide, wherein said polynucleotide is an expression vector capable of expressing the polypeptide in a cell.

15 42. An isolated polypeptide of the sequence in SEQ ID NO:3.

43. The isolated polypeptide of Claim 42, wherein said peptide induces apoptosis in a cell.

20 44. An isolated polynucleotide which encodes the polypeptide of Claim 42.

45. A vector comprising the polynucleotide of Claim 44.

46. The vector of Claim 45 which is the plasmid p[95-114]EGFP[206-245]DEN-2 deposited in the CNCM on January 29, 2001 under the accession number I-2620.

47. A prokaryotic cell comprising the polynucleotide of Claim 44.

5 48. A eukaryotic cell comprising the polynucleotide of Claim 44.

49. A composition comprising the polynucleotide of Claim 44 and a physiologically acceptable carrier.

10 50. A composition comprising the peptide of Claim 42 and a physiological acceptable carrier.

51. A method of inducing apoptosis in a cell comprising administering an effective amount of the polypeptide of Claim 42 to the cell to induce apoptosis.

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52. The method of Claim 51, wherein said cell is in a human patient.

53. The method of Claim 51, wherein said patient is suffering from cancer.

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54. The method of Claim 51, wherein said patient is infected with a Flavivirus.

55. A method of screening for molecules which inhibit apoptosis induced by the polypeptide of the sequence SEQ ID NO:3 comprising

introducing said polypeptide into a cell;
contacting said cell containing said polypeptide, with the molecule to be screened;
and
detecting the presence or absence of apoptosis in the cell.

5 56. The method of Claim 55, wherein said polypeptide is operably linked to the polypeptide of the sequence SEQ ID NO:3.

57. The method of Claim 55, wherein said polypeptide is operably linked to a green fluorescent protein.

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58. The method of Claim 55, wherein said polypeptide is not linked to a green fluorescent protein.

59. The method of Claim 55, wherein said introducing comprises introducing a
15 polynucleotide which encodes said polypeptide, wherein said polynucleotide is an expression vector capable of expressing the polypeptide in a cell.

60. Monoclonal antibodies raised against DEN-1 viral M protein.

61. Monoclonal antibodies raised against DEN-2 viral M protein.

20 62. The plasmid [95-114]EGFP[M10-M40]DEN-2 deposited at the CNM under the accession number I-2684.

63. The plasmid pTripΔU3[95-114]EGFP[206-245]DEN-2 deposited at the CNM under the accession number I-2686.

64. The plasmid pTrip Δ U3[95-114]EGFP[206-245]DEN-1 deposited at the CNCM under the accession number I-2685.